

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

## **LISTING OF CLAIMS:**

### **CLAIMS**

What is claimed is:

1. (Original) A machine readable medium having stored thereon instructions, which when executed by a processor, cause the processor to perform the following:

calculating a first variance for a reported sales rate of an item;  
calculating a second variance for an unreported sales rate of the item;  
generating a first probability distribution for reported sales, during a delay time, of the item;

generating a second probability distribution for unreported sales of the item based on an update time of a ready to sell parameter; and

performing a convolution of the first and second probability distributions to obtain a probability of an availability of the item at an expected time of transaction.

2. (Original) The machine readable medium of claim 1, wherein performing a convolution comprises:

performing a convolution of the first and second probability distributions to obtain convolution values; and

summing the convolution values to obtain a probability of the availability of the item at the end of the delay time.

3. (Currently Amended) The machine readable medium of claim 1, wherein calculating the first variance for a reported sales rate of an item and the second variance for an unreported sales rate of an item further comprises the processor ~~further performs~~ determining the reported sales rate and the unreported sales rate for the item.

4. (Original) The machine readable medium of claim 1, wherein the first probability distribution is a negative binomial distribution for reported sales during the delay time.

5. (Original) The machine readable medium of claim 4, wherein the negative binomial distribution is determined by recursive calculation.

6. (Original) The machine readable medium of claim 5, wherein the second variance is calculated based on an experience level parameter.

7. (Original) The machine readable medium of claim 4, wherein the second probability distribution is another negative binomial distribution for unreported sales during the delay time.

8. (Original) The machine readable medium of claim 1, wherein the sales rate is the rate of sales for a plurality of time units averaged over the plurality of time units.

9. (Original) The machine readable medium of claim 8, wherein the processor further performs adjusting the sales rate to reflect a rate of sale for a particular time period corresponding to the delay time, the particular time period falling within the plurality of time units.
10. (Original) The machine readable medium of claim 1, wherein generating a second probability distribution comprises generating the second probability distribution for unreported sales of the item based on an update time of inventory data.
11. (Currently Amended) An apparatus, comprising:
- means for calculating a first variance for a reported sales rate of an item;
  - means for calculating a second variance for an unreported sales rate of the item;
  - means for generating a first probability distribution for the reported sales rate to obtain a number of units of the item sold during a delay time;
  - means for generating a second probability distribution for the unreported sales rate based on an update time of ready to sell data; and
  - means for performing a convolution of the first and second probability distributions and summing to obtain a probability of an availability of the item at an expected time for the transaction.
12. (Original) The apparatus of claim 11, wherein the means for performing a convolution comprises:

means for performing a convolution of the first and second probability distributions to obtain convolution values; and

means for summing the convolution values to obtain a probability of the availability of the item at the end of the delay time.

13. (Currently Amended) The apparatus of claim 11, wherein:

means for calculating the first variance for a reported sales rate of an item  
further comprises means for determining the reported sales rate; and

means for calculating the second variance for an unreported sales rate of  
an item further comprises ~~further comprising~~ ~~means for determining the reported~~  
~~sales rate and the unreported sales rate.~~

14. (Currently Amended) A computer-implemented method, comprising:

calculating a first variance for a reported sales rate of an item;

calculating a second variance for an unreported sales rate of the item;

generating a first probability distribution for reported sales, during a delay time, of the item;

generating a second probability distribution for unreported sales of the item based on an update time of a ready to sell parameter; and

performing a convolution of the first and second probability distributions to obtain a probability of an availability of the item at an expected time of transaction.

15. (Original) The method of claim 14, wherein performing a convolution comprises:

performing a convolution of the first and second probability distributions to obtain convolution values; and

summing the convolution values to obtain a probability of the availability of the item at the end of the delay time.

17. (Currently Amended) The method of claim 14, wherein:

calculating a first variance for a reported sales rate of an item further comprises ~~comprising~~ determining the reported sales rate; and

calculating a second variance for an unreported sales rate of the item further comprises determining the unreported sales rate.

18. (Original) The method of claim 14, wherein the sales rate is the rate of sales for a plurality of time units averaged over the plurality of time units.

19. (Original) The method of claim 18, further comprising adjusting the sales rate to reflect a rate of sale for a particular time period corresponding to the delay time, the particular time period falling within the plurality of time units.